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John William Vogler

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EXAMINER

GOFF II, JOHN L

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/646,483  
Filing Date: August 22, 2003  
Appellant(s): VOGLER ET AL.

**MAILED**  
**JUN 25 2007**  
**GROUP 1700**

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Michael K. Carrier  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed March 14, 2007 appealing from the Office action mailed September 15, 2006.

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

Claims 12-14 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb (U.S. Patent 3,025,861) in view of McIntosh (U.S. Patent 1,631,750).

Claims 1-5, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb in view of McIntosh and Pearman (U.S. Patent 3,426,764).

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Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb and McIntosh as applied to claims 12-14 and 17-21 above, and further in view of Cobb et al. (U.S. Patent 3,106,501).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb, McIntosh, and Pearman as applied to claims 1-5, 8, and 11 above, and further in view of Cobb et al.

Appellants' statement of the grounds of rejection to be reviewed is the same as that set forth by the examiner in the Advisory Action mailed January 5, 2007 both of which include claims 12-14 and 17-21 in the rejection of Cobb in view of McIntosh and Pearman. However, this statement is incorrect as the Amendment After Final Rejection mailed November 29, 2006 amended claim 1 to incorporate the limitations of claim 7 such that independent claim 1 and the dependent claims therefrom were rejected over Cobb in view of McIntosh and Pearman as of the mailing of the Advisory Action, but claim 12 and the dependent claims therefrom were not amended to incorporate the limitations of claim 7 such that these claims remain rejected as in the Final Rejection mailed September 15, 2006 over Cobb in view of McIntosh.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon****Listing of the Prior Art of Record**

|           |             |         |
|-----------|-------------|---------|
| 3,025,861 | COBB        | 03-1962 |
| 1,631,750 | McINTOSH    | 06-1927 |
| 3,426,764 | PEARMAN     | 02-1969 |
| 3,106,501 | COBB et al. | 10-1963 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 12-14 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb (U.S. Patent 3,025,861) in view of McIntosh (U.S. Patent 1,631,750).

Cobb discloses a method of making a cigarette filter comprising providing a first component of an aggregation of cellulose acetate fibers, exposing the aggregation of fibers to a plasticizing solvent (e.g. triacetin, dimethoxy ethyl phthalate, etc.), providing a paper, coating a side of the paper with cellulose acetate to form a second component, wrapping the aggregation of fibers with the paper to form a compound structure, and curing the compound structure to bond the paper to the aggregation of fibers thereby forming a cigarette filter (Figures 1 and 2 and Column 1, lines 10-16 and Column 2, lines 8-10 and 43-67 and Example II and Column 4, lines 67-75 and Column 5, lines 1-7 and 36-39). Cobb is silent as to the paper having the cellulose acetate, i.e. cellulose ester, incorporated therein. McIntosh discloses a method of forming paper having cellulose acetate incorporated therein comprising incorporating the cellulose acetate into the pulp fibers when forming the paper whereby incorporating the cellulose acetate into the paper as opposed to coating the paper with a resin, i.e. by impregnating the paper with the resin, intimately and uniformly disperses the cellulose acetate throughout the fibers of the paper as well as on the surface of the paper to form a more moisture repellant and durable product with the further advantage of not having to have a step of coating the paper with the resin in a process of bonding with the paper (Page 1, lines 4-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the second component comprising paper and cellulose acetate as taught by Cobb using the method of forming paper having cellulose

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acetate incorporated therein as shown by McIntosh such that the paper for wrapping the aggregation of fibers is improved in moisture repellency and durability and has the further advantage of eliminating the step of coating the paper with the cellulose acetate.

Regarding claim 13, Cobb is silent as to additional applications of the plasticizing solvent to the aggregation of fibers and/or paper including cellulose acetate. However, the plasticizing solvent is included to lower the melting point of the cellulose acetate in the aggregation of fibers and paper to affect a rapid sealing between the two (Column 4, lines 39-46). Absent any unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the required number of applications of plasticizing solvent as taught by Cobb as modified by McIntosh as a function of the ability to affect a rapid sealing between the aggregation of fibers and paper as doing so would have required nothing more than ordinary skill and routine experimentation.

Claims 1-5, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb in view of McIntosh and Pearman (U.S. Patent 3,426,764).

Cobb is modified by McIntosh the same as that set forth above in the rejection of claims 12-14 and 17-21. Cobb and McIntosh teach all of the limitations in claims 1-5, 8, and 11 except for a specific teaching that the pulp fibers that form the paper are cellulose fibers. Pearman discloses a method of forming paper having cellulose acetate incorporated therein comprising incorporating the cellulose acetate into the pulp fibers when forming the paper wherein the pulp fibers are cellulose fibers (Column 3, lines 40-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the pulp fibers of the paper

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taught by Cobb as modified by McIntosh those formed from cellulose as was well known in the art and shown by Pearman only the expected results of forming a paper being achieved.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb and McIntosh as applied to claims 12-14 and 17-21 above, and further in view of Cobb et al. (U.S. Patent 3,106,501).

Cobb and McIntosh as applied above teach all of the limitations in claim 15 except for the particular technique for applying the plasticizing solvent to the aggregation of fibers. Cobb et al. disclose a method of making a cigarette filter comprising providing an aggregation of cellulose acetate fibers, exposing (e.g. by spraying) the aggregation of fibers either before or after condensing to a plasticizing solvent (e.g. triacetin, dimethoxy ethyl phthalate, etc.), providing a paper, and wrapping the aggregation of fibers with the paper (Figures 2, 5, and 6 and Column 4, lines 29-57 and Column 5, lines 10-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the plasticizing solvent as taught by Cobb as modified by McIntosh by spraying as was well known in the art and shown by Cobb et al. as only the expected results would be achieved.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cobb, McIntosh, and Pearman as applied to claims 1-5, 8, and 11 above, and further in view of Cobb et al.

Cobb, McIntosh, and Pearman as applied above teach all of the limitations in claim 15 except for the particular technique for applying the plasticizing solvent to the aggregation of fibers. Cobb et al. disclose a method of making a cigarette filter comprising providing an aggregation of cellulose acetate fibers, exposing (e.g. by spraying) the aggregation of fibers either before or after condensing to a plasticizing solvent (e.g. triacetin, dimethoxy ethyl

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phthalate, etc.), providing a paper, and wrapping the aggregation of fibers with the paper (Figures 2, 5, and 6 and Column 4, lines 29-57 and Column 5, lines 10-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the plasticizing solvent as taught by Cobb as modified by McIntosh and Pearman by spraying as was well known in the art and shown by Cobb et al. as only the expected results would be achieved.

**(10) Response to Argument****Response to appellants' arguments regarding Cobb in view of McIntosh:**

Appellants' argue, "McIntosh describes a "paper product" which is hard, durable, compact, and water-proof (page 1, lines 1-7), in which a cellulose ester is added during processing (page 1, lines 20-22). The product is said to be suitable for a wide variety of uses, such as a raw material from which machine elements such as gears, pulleys, or the like may be formed or machined, and also as an electrical insulator, a material for making containers, or other structures which it is desirable shall be unaffected by moisture, oil or other liquids (page 2, lines 10-21). The products described are said to vary from being "somewhat flexible" to resembling vulcanized fiber, that is, being "hard, compact, and mechanically strong" (page 1, lines 49-57).".

McIntosh discloses a paper product comprising pulp or rag fibers and cellulose acetate incorporated therein where the cellulose acetate functions as an adhesive.

McIntosh teaches, "The above described materials are available of wide variety of uses, such as a raw material from which machine elements such as gears, pulleys, or the like may be formed or machined, and also as an electrical insulator, especially in the construction of switchboards for radio apparatus, a material for making containers, or other structures which it is desirable shall be unaffected by moisture, oil, or other liquids. It is also applicable for the surface veneering of wood or cardboard." (Emphasis added, page 2, lines 10-21).



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In view of the above, McIntosh is not considered to be limited to any particular use for the paper product such that McIntosh does not teach away from using the process of McIntosh to form a paper product of the type used in Cobb.

McIntosh further teaches, "A relatively low percentage, that is from 10 to 15% (based on the finished product), will give a paper product after treatment, as hereinafter described which will be somewhat flexible, while a product containing about 50% of the cellulose ester will resemble vulcanized fibre and will be hard, compact and mechanically strong." (page 1, lines 49-57) and "Considerable modification is possible in the processing of the paper and in the percentages of cellulose acetate used with no departure from the essential features of the invention" (emphasis added, page 2, lines 22-26).

In view of the above, McIntosh is considered to teach the paper product has a wide range of flexibilities as a function of the amount of cellulose acetate used there being no limitation to any particular percentage such that McIntosh does not teach away from using the process of McIntosh to form a paper product of the type used in Cobb.

In summary, the examiner considers the passages in McIntosh as referred to by appellants and as specifically set forth above to describe a paper product having a wide range of uses and wide range of flexibility.

Appellants' further argue, "While McIntosh describes his product as a "paper product," McIntosh compares his products with "impregnated and laminated materials" made by passing the manufactured paper through a bath of synthetic resin solutions and thereafter heating the solutions under pressure to give uniform and highly polished surfaces (page 1, lines 14-19). McIntosh teaches as an advantage of his invention eliminating the step of "impregnation" in making such products (page 1, lines 31-34)." and "It was asserted in the Advisory Action, at page 2, last paragraph, that McIntosh "incorporate[es] the resin into the pulp fibers when forming the paper *as opposed to coating* the paper with the resin..." and that the product of McIntosh does "not hav[e] to have a step of *coating the paper with the resin* (emphasis added)." Contrary to these

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assertions, there is, in fact, no reference in McIntosh to an act of coating such as that described in Cobb '861, nor how a coating such as that described in Cobb '861 may be in any way equivalent to the incorporation method described in McIntosh. Indeed, it is not Cobb '861 nor McIntosh which suggests that coating a paper with a cellulose ester may be, for some purposes, functionally equivalent with incorporating the ester into the paper during paper manufacture, but rather Appellants' own disclosure (page 8, lines 9-11; and lines 25-31 of the application as filed).

Appellants' assertion that coating a paper with a cellulose ester as equivalent with incorporating the ester into the paper during manufacture found in appellants' own disclosure is noted. However, it is the examiners position that McIntosh teaches incorporating the ester into the paper during manufacture is preferable to coating.

McIntosh teaches, "My process gives a product in which the cellulose ester is intimately and uniformly dispersed throughout the fibers as well as upon the surface, resulting in a more water-proof and durable product than has previously been possible by impregnation. A further advantage of my process resides in the elimination of one step in the process, to wit, that of impregnation." (emphasis added, page 1, lines 25-34).

In view of the above, McIntosh is considered to teach that the process of incorporating the ester into the paper results in a more water-proof and durable product than that formed by coating the paper, i.e. impregnating the paper, including the further advantage of eliminating the step of coating, i.e. impregnating, the paper in a process of adhering the paper product. Cobb discloses a paper product comprising paper formed of paper fibers coated with cellulose acetate wherein modifying Cobb to incorporate the cellulose acetate with the paper fibers during the formation of the paper would have been obvious for the reasons above, i.e. forming a more water-proof and durable product while eliminating the step of coating the paper with the

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cellulose acetate in the process of adhering the paper product to the aggregation of cellulose acetate fibers.

In summary, there are only two ways of including the cellulose acetate, i.e. either by coating the paper with the cellulose acetate or incorporating the cellulose acetate into the paper during the formation of the paper, wherein Cobb as modified by McIntosh includes the cellulose acetate into the paper during formation of the paper to eliminate a step of coating the paper with the cellulose acetate, it being further noted appellants have not demonstrated any unexpected results for incorporating the cellulose acetate into the paper over coating the paper with the cellulose acetate.

Appellants further argue, "In reviewing McIntosh for any reference of a coating such as that described in Cobb '861, we see only that McIntosh describes his products as having cellulose ester intimately and uniformly dispersed throughout the fibers *as well as on the surface* (p. 1, lines 25-31, emphasis added), and that sheets of the product may be placed between the heated platens of a press at a pressure of one thousand pounds per square inch at a temperature of one hundred and twenty-five pounds of steam, and the heat and pressure maintained for a time sufficient to cause the cellulose ester to fuse throughout the fibrous mass *and to flow completely over the surface*, forming a *continuous coating* (page 1, lines 72-85, emphases added). There is no suggestion in McIntosh that the "paper products" of that reference might replace a cigarette wrapper paper having a cellulose ester applied as a coating, such as that taught in Cobb '861, nor that the uniform and highly polished surfaces of McIntosh might, for example, serve as a functional replacement for the wrapper paper of Cobb '861 having an adhesive coating applied to it. Simply put, there is no suggestion or motivation in either of the cited references, or in the art generally, to combine the references the way the Examiner has combined them, save Appellants' own disclosure."

The examiner agrees with appellants' assertion that McIntosh teaches the ester flows to form a continuous coating over the paper product wherein the examiner further notes the thus formed paper product is analogous to the coated paper product taught by Cobb.

McIntosh teaches, "The single sheets, if they are of the desired thickness are vulcanized per se, or a laminated product is built up by superimposing one sheet upon another until the

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requisite thickness is obtained. In either case, the heat and pressure step is accomplished in the same manner.” (emphasis added, page 1, lines 64-71) and “The sheets are placed between the heated platens of a suitable press whereby they are subjected to pressure such as one thousand pounds per square inch at a temperature of one hundred and twenty-five pounds of steam. This heat and pressure are maintained for a time sufficient to cause the cellulose ester to fuse throughout the fibrous mass and to flow completely over the surface forming a continuous coating.” (emphasis added, page 1, lines 72-61).

In view of the above, McIntosh is considered to teach a single paper sheet of desired thickness subjected to heat and pressure to cause the cellulose ester, i.e. cellulose acetate, to fuse throughout the fibrous mass of the paper and form a continuous coating over the surface wherein a paper thus formed from the process is considered analogous to the paper product (2 and 3) of Figure 1 of Cobb.

Response to appellants' arguments regarding Cobb in view of McIntosh and Pearman:

Appellants' argue, “When Pearman is combined with Cobb '861, we see that Cobb '861 teaches a wrapper paper having an adhesive applied so that the paper adheres to the cellulose acetate filaments used as the filtering material, while Pearman teaches the use of paper as the filtering material. Thus, Pearman suggests that the paper itself provides suitable filtration, and that other filtering materials such as the cellulose acetate filaments of Cobb '861 are not required, while Cobb '861 teaches the use of cellulose acetate filaments as the filtering material, with a wrapper paper having an adhesive applied to assist in adhering the paper to the filaments. The paper of Cobb '861 is not the filtering material, but rather is wrapped around the filtering material, and does *not* have fibers of acylated esters of cellulose incorporated in it, nor is there any suggestion seen to so modify the paper of Cobb '861. There would therefore be no reason to combine Cobb '861 with Pearman.”.

Cobb as modified by McIntosh teach a paper product formed from pulp and rag fibers.

While it would appear that pulp and rag fibers as used in paper formation are necessarily

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cellulose, e.g. wood, cotton, etc., there is no specific teaching that the pulp and rag fibers are cellulose fibers.

Pearman teaches, "In the manufacture of the filter paper the selected type and quantity of cellulose esters is added to the mixing vat containing the refined or partially refined natural cellulose or wood pulp." (page 3, lines 40-43).

In view of the above, Pearman is considered to teach a method of forming paper having cellulose acetate incorporated therein, i.e. a paper product analogous to the paper product formed by Cobb as modified by McIntosh, comprising incorporating the cellulose acetate into the pulp fibers when forming the paper wherein the pulp fibers are cellulose fibers.

In summary, Cobb and McIntosh are modified by Pearman as a showing of forming an analogous paper product wherein the pulp and rag fibers of the paper are of the well known type, i.e. cellulose.

Appellants' further argue, "The waterproof material of McIntosh suitable for use as a container is clearly unsuitable for use as the filtering material of Pearman, since the waterproof material would prevent moisture, or indeed anything else, from passing through the material. When one considers that pressure drop is an important consideration in designing a proper cigarette filter (Pearman column 1, lines 57-69), it is hard to imagine the waterproof material of McIntosh being used as a filtering material as in Pearman, since one would reasonably expect a waterproof material to substantially impede the flow of cigarette smoke. Even if it were possible to obtain a waterproof material that did not impede the flow of smoke, which seems unlikely, the smoke would then be dry and hot, properties that Pearman intends to avoid (column 1, lines 47-57). There is therefore no reason to think that the paper of either reference might be suitably adapted for use according to the other."

A rejection modifying the paper product of Pearman to that of McIntosh has not been set forth such that appellants' arguments regarding such a combination are moot. However, appellants' arguments that the material of McIntosh used as the filtering material in Pearman would not be suitable are not supported by Pearman.

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Pearman teaches, "For example, it has been found that the addition of fibers of cellulose esters to the filter paper reduces the amount of moisture that will be absorbed by the paper. This, as will be apparent, results in the filters removing less moisture from the cigarette smoke and thus presents a cooler smoke to the cigarette smoker. Furthermore, the presence of cellulose ester fibers in the paper filter can be used to improve the firmness or hardness of the filter." (page 2, lines 47-54).

In view of the above, Pearman is considered to teach that the incorporation of the cellulose acetate into the paper makes for a more water-proof paper resulting in a cooler smoke and improves the firmness or hardness of the filter.

In summary, Pearman is considered to further demonstrate the obviousness of Cobb in view of McIntosh in that the paper product formed by the combination having the properties noted by appellants, i.e. water-proof and hard, are properties desired in the art for a cigarette filter paper as shown by Pearman.

Response to appellants' arguments regarding Cobb in view of McIntosh and Cobb et al.:

No further arguments are made.

Response to appellants' arguments regarding Cobb in view of McIntosh, Pearman, and Cobb et al.:

No further arguments are made.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



John L. Goff  
Primary Examiner  
Art Unit: 1733

Conferees:



Richard Crispino



Christopher A. Fiorilla